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10/022,168	12/13/2001	Michael D. James	GB 000182	3955

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EXAMINER

POWERS, WILLIAM S

ART UNIT

PAPER NUMBER

2134

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/12/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/022,168

Applicant(s)

JAMES, MICHAEL D.

Examiner

William S. Powers

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 and 8-22 is/are pending in the application.
- 4a) Of the above claim(s) 5-7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 8-14, 16, 18 and 20-22 is/are rejected.
- 7) ☐ Claim(s) 15, 17 and 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 August 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/16/2007 has been entered.

### ***Response to Arguments***

2. Applicant's argument, in light of the limitations of dependent claims 15, 17 and 19, are persuasive.

### ***Response to Amendment***

### ***Claim Rejections - 35 USC § 112***

3. Claims 8 and 10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter

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which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As to claim 8, there is no mention of the outputting of a plurality of decryption keys as stated in the limitations in lines 5, 8 and 10 in the Specification.

As to claims 8 and 10, there is no disclosure in the Specification for the limitation "conditional access module" present in claims 8 and 10. For purposes of examination, the Examiner assumes that the elements that exchange the encryption key are digital televisions with digital set top boxes.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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5. Claims 1, 2, 4, 8, 10, 13, 14, 18 and 22 are rejected under 35 U.S.C. 102(e) as being unpatentable over US Patent No. 6,826,699 to Sun.

As to claim 1, Sun teaches:

- a. A plurality of discrete television sets (a network of source and sink devices that can be digital televisions) (Sun, column 6, lines 1-14).
- b. Said plurality of discrete television sets comprising a plurality of respective signal decoding arrangements for decoding digital television signals for display at the television sets (digital set top box) (Sun, column 6, lines 1-14).
- c. Said plurality of respective decoding arrangements having respective cryptographic engines configured for executing conditional access (sink uses encryption key to decrypt encrypted digital information) (Sun, column 9, lines 28-36).
- d. A network linking the plurality of discrete television sets (Sun, column 6, lines 15-30).
- e. Wherein said system is configured for transferring, over said network from a source from among said plurality of respective signal decoding arrangements to a destination from among said plurality of respective signal decoding arrangements, a decryption key usable for conditional access by the respective cryptographic engine of the destination signal decoding arrangement (Sun, column 9, lines 28-36).

As to claim 2, Sun teaches said network comprises television signal distribution network for delivering said digital television signals to the plurality of discrete television sets (the network comprises digital televisions and distributes digital information between the digital televisions for viewing) (Sun, column 4, lines 37-51).

As to claim 4, Sun teaches said distributed digital television system is configured to transfer said decryption key under a separate cryptographic layer (using the 5C Digital Transmission Content Protocol Authentication and Key Exchange) (Sun, column 6, lines 45-50).

As to claim 8, Sun teaches:

- a. A digital signal decoding arrangement for receiving coded digital television signals (digital set top box) (Sun, column 6, lines 1-14).
- b. A conditional access module (digital set top box) for inputting and outputting decryption keys (Sun, column 4, line 52-column 5, line 5).
- c. Said decryption keys serving to control the decoding of the digital television signal either locally within the apparatus by said conditional access module inputting the decryption keys, or remotely at a further digital television apparatus by said conditional access module outputting the decryption keys (the keys are used to decrypt encrypted data signals) (Sun, column 9, lines 28-36).

As to claim 10, Sun teaches:

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- a. Decoding incoming television signals locally at each television set (digital set top box) (Sun, column 6, lines 1-14).
- b. Distributing decoding authorization data between the plurality of discrete television sets (Sun, column 9, lines 28-36).
- c. Wherein the distributing step comprises transferring a decryption key from a conditional access module (digital set top box) of a digital decoding arrangement associated with one television set for operation in association with a conditional access module of a digital decoding arrangement associated with another television set (Sun, column 9, lines 28-36).

As to claims 13 and 22, Sun teaches, “an unlimited number of devices could theoretically be coupled together on [the] network, all of which could communicate together” (Sun, column 6, lines 21-23).

As to claim 14, Sun teaches use of transferring an encryption key associated with pay-per-view content (Sun, column 9, lines 28-35 and 51-64).

As to claim 18, Sun teaches a plurality of television sets make up the network (Sun, column 6, lines 21-23).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,826,699 to Sun as applied to claim 2 above, and further in view of US Patent No. 5,886,732 to Humpleman.

As to claim 3, Sun discloses a peer-to-peer network that allows data transmission directly between points of the network, but does not explicitly mention the use of cables and filters to achieve the data transmissions. However, in an analogous art, Humpleman teaches said network includes filters (Humpleman, column 8, lines 60-64) and radio frequency feeder cables mutually arranged to selectively route (Humpleman, column 6, lines 53-60) said decryption key, transferred from said source to said destination and said digital television signals (Sun, column 9, lines 28-36).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the authentication and key exchange of Sun with the filters and cables of Humpleman in order to manage data transmissions within the network as suggested by Humpleman (Humpleman, column 9, lines 9-15).



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8. Claims 9 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,826,699 to Sun, as applied to claim 8 in the case of claim 16, in view of US Patent No. 5,237,610 to Gammie et al. (hereinafter Gammie).

As to claim 9, Sun teaches:

- a. Means for inputting decoding authorization data so as to control, locally within the unit, the decoding of a coded digital television signal received, said means being further configured for outputting decoding authorization data to another digital television unit (Sun, column 4, lines 47-51 and column 6, lines 15-44).
- b. Said outputted decoding authorization data controlling decoding of a coded digital television signal received at said another digital television unit (Sun, column 9, lines 27-36).

Sun does not expressly mention demultiplexing means in the digital television devices.

However, in an analogous art, Gammie teaches:

- c. A paired television set and digital decoding arrangement that includes demultiplexing means for splitting, from a received digital television signal, said decoding authorization data for local control (the demultiplexing decoding data from the program data with a demultiplexer) (Gammie, column 12, lines 20-30).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the authentication and key exchange of Sun

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with the demultiplexing means of Gammie in order to protect programming from pirates as suggested by Gammie (Gammie, column 3, lines 11-23).

As to claim 16, Sun as modified teaches said local television apparatus further comprises a paired television set and digital decoding arrangement, said digital decoding arrangement including a cryptographic engine, a first demultiplexer for splitting decoding authorization data from a received signal to yield a remaining signal, and a second demultiplexer for dividing said remaining signal into separate signals for inputting into said cryptographic engine (Gammie, column 12, lines 20-30).

9. Claim 11 and claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,826,699 to Sun as applied to claim 1 and claim 10 respectively above, and further in view of US Patent Application No. 2001/0030959 to Ozawa et al. (hereinafter Ozawa).

As to claims 11 and 20, Sun does not expressly mention the use of smart cards in the digital set top boxes. However, in an analogous art, Ozawa teaches transferring a decryption key from a smart card of said source arrangement to a smart card of said destination arrangement (Ozawa, page 3, paragraph 31).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the authentication and key exchange of Sun with the smart card of Ozawa in order to use of a smart card in a set top box to "provide

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the key for decoding incoming cryptographic data for content that the CAM [smart card] determines the user is authorized to receive" as suggested by Ozawa (Ozawa, page 3, paragraph 31).

As to claim 21, Sun as modified teaches a key management hardware configured for communicating with a radio frequency local area network between ones of said plurality of discrete television sets (Sun, column 6, lines 15-30).

10. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,826,699 to Sun in view of US Patent Application No. 2001/0030959 to Ozawa et al. (hereinafter Ozawa) as applied to claim 11 above, and further in view of US Patent No. 5,886,732 to Humpleman.

As to claim 12, Sun as modified Sun discloses a peer-to-peer network that allows data transmission directly between points of the network, but does not explicitly mention the use of cables and filters to achieve the data transmissions. However, in an analogous art, Humpleman teaches said network includes filters (Humpleman, column 8, lines 60-64) and radio frequency feeder cables mutually arranged to selectively route (Humpleman, column 6, lines 53-60) said decryption key, transferred from said source to said destination and said digital television signals (Sun, column 9, lines 28-36).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the authentication and key exchange of Sun

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as modified with the filters and cables of Humpleman in order to manage data transmissions within the network as suggested by Humpleman (Humpleman, column 9, lines 9-15).

### ***Allowable Subject Matter***

11. Claims 15, 17 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William S. Powers whose telephone number is 751 272 8573. The examiner can normally be reached on m-f 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Zand can be reached on 571 272 3811. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



3/6/2007

William S. Powers  
Examiner  
Art Unit 2134



KAMBIZ ZAND  
PRIMARY EXAMINER